



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,448	12/07/2001	Keisuke Asami	10830-082001/A36-137195M/	5082

26211 7590 09/24/2003

FISH & RICHARDSON P.C.
45 ROCKEFELLER PLAZA, SUITE 2800
NEW YORK, NY 10111

EXAMINER

VY, HUNG T

ART UNIT PAPER NUMBER

2828

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,448

Applicant(s)

ASAMI, KEISUKE

Examiner

Hung T Vy

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 08/08/2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Paul Ip

PAUL IP

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. In response to the amendment file on 08/08/2003, claims 1-7 are pending in this application.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, and 3-7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over admitted prior art (Admission) in view of Funakawa, Pub. U.S. No. 2001/0036218 (Japan Patent No. P.2000-127911).

Regarding claims 1, 3, 6, Admission discloses a wavelength tunable light source comprising: a semiconductor laser (1) in which one of end surface is applied an anti-reflection film; a lens (5,6); a wavelength selection portion including a diffraction grating (2) and a mirror (3); and a motor (23), wherein a light beam is emitted from the one of end surfaces; the lens collimates the light beam; the wavelength selection portion selects a light beam having desired wavelength from the collimated light beam to return the selected light beam to the semiconductor laser so that laser oscillation occurs; a center of rotation of the mirror is provided in a position where mode hopping is

Art Unit: 2828

suppressed when a wavelength in the laser oscillation is tuned (See fig. 7,8), but Admission does not disclose a rotation of the mirror is driven by direct drive system by using the motor having a rotation shaft in the center of rotation of the mirror. However, Funakawa discloses a rotation of the mirror is driven by direct drive system by using the motor (12) having a rotation shaft (11) in the center of rotation of the mirror (See fig 7)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Admission to have rotation of the mirror is driven by a direct system by using the motor having a rotation shaft in the center of rotation of the mirror as taught by Funakawa because those skilled in the art will recognize that such modification and variations can be made to get continuous wavelength scanning without departing from the spirit of the invention.

Regarding claim 4-5 and 7, Admission discloses the claimed invention except for the motor is a servo-motor, or a voice coil motor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a servo-motor, or a voice coil motor, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

3. Claim 2 is rejected under 35 U.S.C. 103 (a) as being unpatentable over admitted prior art (Admission) in view of Funakawa, Pub. U.S. No. 2001/0036218 (Japan Patent No. P.2000-127911) and further in view of Asami, U.S. Patent No. 6,295,306.

Regarding claim 2, Admission and Funakawa discloses all limitation of the wavelength tunable light source except an optical branching device provided between

Art Unit: 2828

the semiconductor laser and the diffraction grating but Asami disclose an optical branching device provided between the semiconductor laser (210) and the diffraction grating (250) for taking out a part of the selected light beam, wherein the light beam taken out by the optical branching device is used as an output light beam (261)(See fig 2). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Admission and Funakawa to have an optical branching device as taught by Asami because those skilled in the art will recognize that such modification and variations can be made to get continuous wavelength scanning without departing from the spirit of the invention.

Response to Arguments

4. Applicant's arguments filed on 07/27/2003 have been fully considered but they are not persuasive. Applicant admits that the prior art disclose every thing as fig. 6-8 except for a rotation of the mirror is driven by direct drive system by using the motor having a rotation shaft in the center of rotation of the mirror, even though on fig 7-8, the prior art discloses the direct drive motor (23) and a rotary arm (22) that working the same function as invention as motor having a rotation shaft in the center of rotation of the mirror. Further, applicant made the following arguments:

- a. "Therefore, there would have been no motivation to modify the admitted prior art using the disclosure of the Vilhelmsson document to obtain the subject mater of claim 1" page 4 first sixth paragraph.

b. "Similarly, the Funakawa document relates to an external resonator type laser and discloses a motor 12 as a rotation shaft of an arm 11 supporting a diffraction grating GR2. The motor 12 does not drive a mirror as recites in claim 1, Indeed, the Funakawa document actually teaches way from using a mirror: according to the first aspect of the invention, since the external resonator type laser source hasTherefore, one of ordinary skill in the art would not have been motivated to use a mirror as recited in the pending claims " page 5 first full paragraph.

c. "Further, the Funakawa document is not properly cited as prior art with respect to the pending application, which was filed on December 7, 2001—only several weeks after publication of the Funkawa document... Therefore, that patent is not pror art undr 35 U.S.C. 102(a),(b), (e), with respect to the pending claims " page 5, second and third full paragraph.

In response to Applicant's argument **a** above, with respect to the applicant's argument have full considered and are persuasive. Therefore, the rejection of Vilhelmsson has been withdrawn.

In response to Applicant's argument **b** above, with respect to the applicant's argument have full considered and they are not persuasive because the prior art (Figs. 6-8) discloses all limitation of invention except just only a rotation of the mirror is driven by direct drive system by using the motor having a rotation shaft in the center of rotation of the mirror. Funakawa discloses the a motor 12 as a rotation shaft of an arm 11

Art Unit: 2828

supporting a diffraction grating GR2 but Funakawa also discloses the diffraction grating is used instead of a mirror so GR2 can be a mirror as invention (see paragraph 0014). Further, on Figs. 7-8 of Prior art, the prior art discloses the direct drive motor (23) and a rotary arm (22) that working the same function as invention. It would have been obvious at the time the invention was made to a person having ordinary skill in the art would have been motivated to use a mirror as recited in the pending claims.

In response to Applicant's argument c above, with respect to the applicant's argument have full considered and they are not persuasive because the Funakawa document claims the priority date of Japanese patent application (4/27/2000). Base on the priority date of Funakawa, the applicant's argument is uncorrected. Therefore, the rejection U.S.C 103(a) is properly. (The 35 U.S.C 103 states: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth insection 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.)

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


Art Unit: 2828

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (703) 605-0759. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (703) 308-3098. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Hung T. Vy
Art Unit 2828
September 19, 2003


PAUL IP
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800